AMENDMENTS TO THE CLAIMS

1. – 10. (Canceled)

11. (Original) A process for the culture of pluripotent stem cells, which comprises culturing the pluripotent stem cells under a condition such that adenylate cyclase activity is inhibited, said process allowing the pluripotent stem cells to proliferate or establish while maintaining the cells in an undifferentiated state.

12. (Currently amended) The process according to claim 11, wherein the condition such that adenylate cyclase activity is inhibited ~~involves the use of~~ is provided by addition of an inhibitor of adenylate cyclase activity to the medium for culture of the pluripotent stem cells.

13. (Currently Amended) The process according to claim 11, wherein the culture process is performed using ~~the~~ a minimal culture medium ~~according to any one of claims 6 to 10~~.

14. (Previously presented) The process according to claim 11, wherein the pluripotent stem cells are ES cells.

15. (Previously presented) The process according to claim 11, wherein the pluripotent stem cells are derived from a mammal.

16. (Previously presented) The process according to claim 11, wherein the pluripotent stem cells are derived from a human.

17. (Original) A process for the preparation of a clonal population of undifferentiated pluripotent stem cells, which comprises culturing the undifferentiated pluripotent stem cells under a condition such that adenylate cyclase activity is inhibited.

18. (Original) A process for the preparation of a clonal population of undifferentiated pluripotent stem cells, which comprises isolating undifferentiated pluripotent stem cells from a living body, and culturing the undifferentiated pluripotent stem cells under a condition such that adenylate cyclase activity is inhibited.

19. (Currently amended) The process according to claim 17, wherein the condition such that adenylate cyclase activity is inhibited ~~involves the use of~~ is provided by addition of an inhibitor of adenylate cyclase activity to the medium used for culture of the pluripotent cells.

20. (Previously presented) The process according to claim 17, wherein the culture process is performed using ~~the~~ a minimal culture medium ~~according to any one of claims 6 to 10~~.

21. (Previously presented) The process according to claim 17, wherein one pluripotent stem cell is cultured to provide a clonal population of the cells.

22. (Currently amended) The process according to claim 17, wherein pluripotent stem cells are cultured in ~~the~~ a medium ~~according to claim 7 or 8~~ free of feeder cells or free of serum or free of both, to provide a clonal population of the cells, in which the pluripotent stem cells are seeded at a lower density than that which allows adjacent pluripotent stem cells to interact with each other, so as to induce the proliferation of undifferentiated pluripotent stem cells.

23. (Currently Amended) The process according to claim 17, wherein one pluripotent stem cell is cultured in ~~the~~ a medium ~~according to claim 7 or 8~~ free of feeder cells or free of serum or free of both, to provide a clonal population of the cells.

24. (Previously presented) The process according to claim 17, wherein the pluripotent stem cells are ES cells.

25. (Previously presented) The process according to claim 17, wherein the pluripotent stem cells are derived from a mammal.

26. (Previously presented) The process according to claim 17, wherein the pluripotent stem cells are derived from a human.

27. – 29. (Canceled)

30. (New). The process of claim 12, wherein the inhibitor of adenylate cyclase activity is selected from the group consisting of SQ22536 (9-(tetrahydro-2-furanyl)adenine), 2',5'-

dideoxyadenosine, 9-cyclopentyladenine, 2',5'-dideoxyadenosine 3'-diphosphate, 2',5'-dideoxyadenosine 3'-monophosphate, and MDL-12,330A (cis-N-(2-phenylcyclopentyl)azacyclotridec-1-en-2-amine).

31. (New) The process of claim 19, wherein the inhibitor of adenylate cyclase activity is selected from the group consisting of SQ22536 (9-(tetrahydro-2-furanyl)adenine), 2',5'-dideoxyadenosine, 9-cyclopentyladenine, 2',5'-dideoxyadenosine 3'-diphosphate, 2',5'-dideoxyadenosine 3'-monophosphate, and MDL-12,330A (cis-N-(2-phenylcyclopentyl)azacyclotridec-1-en-2-amine).

32. (New) The process of claim 12, wherein the inhibitor of adenylate cyclase activity is selected from the group consisting of adrenocorticotropic hormone (ACTH), brain natriuretic peptide (BNP), pituitary adenylate cyclase activating polypeptide (PACAP), and a peptide having a physiological activity substantially similar to them.

33. (New) The process of claim 19, wherein the inhibitor of adenylate cyclase activity is selected from the group consisting of adrenocorticotropic hormone (ACTH), brain natriuretic peptide (BNP), pituitary adenylate cyclase activating polypeptide (PACAP), and a peptide having a physiological activity substantially similar to them.

34. (New) The process according to claim 11, wherein the medium is free of feeder cells or of serum or free of both.

35. (New) The process according to claim 11, wherein the medium further comprises a differentiation inhibitory factor, a serum replacement and an antioxidant.

36. (New) The process according to claim 17, wherein the medium further comprises a differentiation inhibitory factor, a serum replacement and an antioxidant.

37. (New) The process of claim 12, wherein the medium comprises leukemia inhibitory factor, 2-mercaptoethanol, KSR and adrenocorticotrophic hormone.

38. (New) The process of claim 19, wherein the medium comprises leukemia inhibitory factor, 2-mercaptoethanol, KSR and adrenocorticotrophic hormone.

39. (New) The process of claim 12, wherein the medium comprises leukemia inhibitory factor, 2-mercaptoethanol, KSR and SQ22536.

40. (New) The process of claim 19, wherein the medium comprises leukemia inhibitory factor, 2-mercaptoethanol, KSR and SQ22536.